

Kelly Ranch
Habitat Conservation Area
(CNLM No: S024)

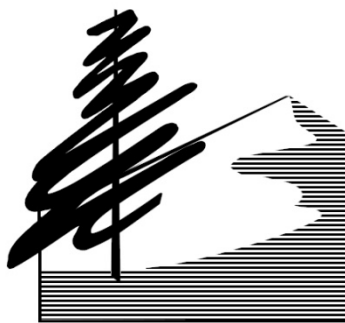
Annual Work Plan

October 2009 - September 2010

Prepared for:

U.S. Fish and Wildlife Service
California Department of Fish and Game
City of Carlsbad

Prepared by:



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INTRODUCTION AND SUMMARY

This work plan has been developed from the guidelines for goals and objectives set forth in the Kelly Ranch Habitat Conservation Area (HCA) Management Plan dated April 2008 (CNLM 2008). The Management Plan includes management requirements as agreed to by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), and additional management activities that the Center for Natural Lands Management (CNLM) feels is appropriate to protect and maintain the natural resources in perpetuity. CNLM holds a conservation easement (since February 2002) on the Kelly Ranch Habitat Conservation Area (HCA) and performs or oversees the tasks identified in the management plan.

The purpose of this work plan is to identify the tasks and budget required to complete the management activities for the upcoming fiscal year that will begin on October 1, 2009 and end on September 30, 2010. Unless otherwise stated, all tasks will be performed by CNLM's Area Manager: Markus Spiegelberg, and HCA Managers: Patrick McConnell and Jessica Vinje.

Summary of Tasks and Goals for the 2009-2010 Fiscal Year:

- Replace, relocate (and install) signs and fix fencing as necessary
- Note all sensitive animal species observed
- Perform habitat assessment and continue population studies on Orcutt's hazardia (*Hazardia orcuttii*)
- Conduct surveys for coastal California gnatcatcher (*Polioptila californica californica*)
- Remove natal grass (*Melinis repens*), Veldt grass (*Ehrharta* sp.), Saharan mustard (*Brassica tournefortii*) and Pampas grass (*Cortaderia selloana*).
- Follow progress of habitat restoration activities with Planning Systems, Inc.
- Patrol and conduct site enforcement on a regular basis
- Report conservation easement for compliance to conservation values
- Report and describe data collected and management actions taken on the HCA to the wildlife agencies
- Provide an accounting of funds to be spent in the fiscal year

Appendix 1 (*Task Schedule*) identifies the approximate schedule of tasks for the upcoming fiscal year. Appendix 2 (*Annual Budget*) provides a financial summary for both staff time and costs for the year. The location of the HCA is shown in Appendix 3

MANAGEMENT ACTIVITIES

The following sections identify and describe the activities to be performed during this fiscal year. Based upon the Property Analysis Record (PAR) developed by CNLM to outline long-term management tasks and costs, management activities for the HCA can be broken down into seven tasks: Capital Improvements, Biological Surveys, Habitat Restoration, Public Services, Reporting, Office Maintenance, and Operations. Each of these categories will be discussed below.

CAPITAL IMPROVEMENTS

Kiosks. We will update two kiosks with fresh maps, brochures, and public interest materials during this fiscal year.

Signing. CNLM signs have been posted at all of the major access points and along most of the perimeter to the HCA and a few other notable locations. These signs will be replaced or moved to more appropriate locations as necessary. Additionally, several new signs will be posted in areas to discourage the public from accessing and dumping in the HCA. Each sign explains that the HCA is a dedicated open space, and that OHV activity, mountain biking, dumping and shooting are prohibited.

BIOLOGICAL SURVEYS

Monitoring activities at the HCA will continue over the next fiscal year (Table 1). See Kelly Ranch HCA Management Plan (CNLM 2008) for details of habitat assessment methods.

The majority of wart-stem lilac and shrub oak were censused and mapped during the 2008-2009 fiscal year. Monitoring during the next year will mostly include habitat assessments on habitat containing wart-stem lilac, Orcutt's hazardia, and Palmer's grapplinghook (*Harpagonella palmeri*). We may sample more of the presumed Del Mar manzanita, and will also perform coastal California gnatcatcher surveys. All data on location and counts will be entered or stored in a Geographic Information System (GIS) database. A brief description of monitoring activities outlined by taxa is provided below:

- 1. Sensitive Plant Species Surveys.** We will note the location of any rare plants not already mapped at specific locations on the HCA when observed. No focused sensitive plant surveys will take place during this management year due to a reduced budget.
- 2. Habitat Assessments** Included in this fiscal year will be habitat assessments for sensitive species known to occur on the HCA (Table 1).
- 3. Wart-stem lilac** Suitable locations for at least two long-term monitoring sites will be determined, and scientifically sound methodology will be used in monitoring the cover, diversity, and health of wart-stem lilac stands (see CNLM 2008).

4. **Orcutt's hazardia** Surveys will continue to include assessments of the transplanted Orcutt's hazardia, and will encompass counts of adult transplants as well as recruitment studies (see below). If the necessary weed treatments are not too budget-constricting, we may assess the ground cover and plant diversity surrounding these hazardia transplants/seedlings. Subjective observations indicate that seedlings tend to prefer a particular density of native plants and open ground, but this small-scale pattern has not yet been quantified. See CNLM 2009 for more information on counts and pattern for Orcutt's hazardia measures.
5. **Palmer's grapplinghook** The largest Palmer's grapplinghook population on the HCA occupies the same ground as Orcutt's hazardia transplants. The assessment of hazardia, therefore, will necessarily include an assessment of grapplinghook habitat. The data collection will be accomplished in a manner which can separate out measures local to hazardia shrubs, and thus can be independently analyzed for trends in the open areas containing grapplinghook.
6. **Orcutt's hazardia population studies.** Transplanted hazardia will continue to be censused. As with last year, seedlings will be counted, and height, distance, and the azimuth position relative to the closest shrub will also be recorded for each seedling. Data recorded also includes whether each seedling is alive or dead, and a size class category. Size classes are: seedling (no branching), juvenile (branching, no flowering), or adult (flowering). Demography measures may aid in producing a population viability model at some future time. Seed viability studies (Typically a component of population viability matrices) are not currently plausible, due to a limited annual budget.
7. **Del mar manzanita.** Voucher sampling has occurred, and voucher samples are still awaiting identification at the San Diego Natural History Museum Botany Department. We are presently unsure about sub-specific identification. It has been recommended by U.S. Fish and Wildlife Service personnel that samples be sent to Dr. John Keeley (See Keeley 2007) for sub-specific identification. If plants are deemed healthy enough for more vegetation removal and vouchering, this will be accomplished during spring 2010.
8. **Coastal California gnatcatcher surveys.** Location and abundance surveys using USFWS protocol will be carried out this fiscal year during spring months.

No other biological monitoring activities are planned for the fiscal year, aside from incidental wildlife mapping while carrying out other tasks.

Table 1. Sensitive Plant List, Schedule of Surveys 2009-2010

Name and Sensitivity	1998	2003	2004-2008	2009	2009-2010
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>) FE, CNPS List 1B.1, MHCP.	29 (probably spp. <i>zacaensis</i>)	<50 located in dense habitat and difficult to count	Likely present	Very likely present	Re-sample for voucher specimens late spring 2010
Wart-stem lilac (<i>Ceanothus verrucosus</i>) CNPS List 2.2, MHCP	“in the hundreds”	9		Most locations mapped, for a count of 618 individuals	Mapping, censusing & habitat assessment 2010
Small-flowered microseris (<i>Microseris douglasi</i> var. <i>platycarpa</i>) CNPS List 4.2	20	not found, probably impacted by development	Not found	Not surveyed as planned	Next survey in 2010
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4.2	unknown	common	Several populations found	Several found and mapped	Map where located
Palmer’s grapplinghook (<i>Harpagonella palmeri</i>) CNPS List 4.2	???	Approximately 400	Over 100 individuals 2006 Two areas found. Censused and mapped 1203 counted, an additional 550 estimated 2008		Habitat assessment 2010
Orcutt’s hazardia (<i>Hazardia orcuttii</i>) CT,CNPS list 1B.1 MHCP	none	20 (transplanted from the Manchester HCA)	100 planted in 2004, Approximately 100 censused 2005 106 adults, 3 seedlings 2007 100 adults, 17 seedlings, 1 juvenile 2008	104 adults, 4 juveniles, 110 alive seedlings censused August 2009 14 seedlings were likely survivors from 2008, 16 seedlings were likely survivors from 2008	Census & Habitat assessment 2010

Table 2. Sensitive Plant List, Schedule of Surveys 2009-2010, continued.					
Name and Sensitivity	1998	2003	2004-2008	2009	2009-2010
Nuttall's scrub oak (<i>Quercus dumosa</i>) MHCP, CNPS List 1B.1	??? ("lightly scattered")	common	11 mapped 2008	13 mapped	Census and map 2010
Cliff spurge (<i>Euphorbia misera</i>) MHCP, CNPS List 2.2	"one thicket"	3	Approximately 16 censused & mapped 2008		Census 2010
California boxthorn (<i>Lycium californicum</i>) CNPS List 4.2			Two stands found & mapped 2008		

FE= Federally listed endangered; CT= California threatened; MHCP= Multiple Habitat Conservation Program Covered Species; CNPS= California Native Plant Society listing criteria; ???= no initial count made during planning process.

HABITAT RESTORATION AND MAINTENANCE

Most of the HCA's habitat is good quality, with little disturbance from nonnative species (Table 2). The most disturbed area is located west of Cannon Road and other small patches of disturbed area exist scattered throughout the HCA. The Kelly Land Company/Shea Homes (developer) was responsible for the enhancement in many of these disturbed areas and has almost completed an enhancement plan that began in 2005 (Planning Systems, 2001). CNLM will continue to follow the progress of the enhancement and restoration activities.

This fiscal year, as with last year, our primary objectives will be the eradication of Natal grass and Saharan mustard. Natal grass was found growing densely in open coastal sage scrub in the center of the HCA in 2006. Yearly control efforts have been ongoing. The species is currently of limited spatial extent, probably totaling less than a quarter acre. The goal will be to hand pull and apply grass-specific herbicide where appropriate in the winter months, before the grasses flower. Another weed that has become a problem is Saharan mustard, and any emergent infestations of this weed will be promptly hand removed prior to seed-set. Any Pampas grass will be found and killed during the late summer months, as they make themselves more apparent by flowering. A few Veldt grass (*Ehrharta* sp.) have been found in the area surrounding cliff spurge, and we will attempt to find and eradicate all Veldt grass. The priority weeds for removal will remain those listed above, as they pose a much more imminent threat to the viability of the HCA than weeds like tree tobacco.

PUBLIC SERVICES

Public service activities include the patrolling of the HCA, consulting with neighbors and the Home Owners Association (HOA) about perimeter landscaping and responding to emergencies. However, other opportunities for public service may be forthcoming during the year with local groups and individuals interested in volunteering labor for HCA projects, and class field trips from local schools. CNLM will try to accommodate these activities whenever possible.

1. Patrols Patrols will be performed approximately two times per month, and during biological surveys or other HCA management activities. Routine trash removal, fence and sign repair are the main tasks. Observations of sensitive species, and new human impacts will be noted during patrols.

2. Emergency Response Staff time has been allocated from the current budget for response to emergencies on the HCA. Such emergencies could include response to wildfires, wildlife problems reported by neighbors and illegal trespass.

Table 3. Sensitive plants present and threats 2009-2010

Name	Threats	Actions Planned
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>) FE, CNPS List 1B.1, MHCP.	Natal grass Veldt grass Human disturbance	*Grass control will take place throughout HCA Frequent patrol
Wart-stem lilac (<i>Ceanothus verrucosus</i>) CNPS List 2.2, MHCP	Fire Human disturbance	Frequent patrol
Small-flowered microseris (<i>Microseris douglasi</i> var. <i>platycarpa</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand- pulled, Frequent patrol
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand- pulled, Frequent patrol
Palmer's grapplehook (<i>Harpagonella palmeri</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand- pulled, Frequent patrol
Orcutt's hazardia (<i>Hazardia orcuttii</i>) CT, CNPS list 1B.1 MHCP	Saharan mustard Other shrubs Human disturbance	Any threats deemed to decrease recruitment will be controlled
Nuttall's scrub oak (<i>Quercus dumosa</i>) MHCP, CNPS List 1B.1	Human disturbance	Frequent patrol
Cliff spurge (<i>Euphorbia misera</i>) MHCP, CNPS List 2.2	Fire Natal grass Veldt grass Human disturbance	Frequent patrol Grass control will take place throughout HCA
California boxthorn (<i>Lycium californicum</i>) CNPS List 4.2	Fire Natal grass Veldt grass Human disturbance	Frequent patrol Grass control will take place throughout HCA

*Grass refers to the two species of South African origin presently on HCA: Natal and Veldt grass

REPORTING

Reporting requirements include the management of the HCA's database/GIS system, the photo-documentation stations, and the production of various status reports to the USFWS, CDFG and CNLM administration.

1. Database/GIS Management Data derived from routine patrols and photo-documentation will be entered into and maintained in the HCA's existing database/GIS system. Additional databases will be established for the various biotic monitoring programs including the production of historical and current vegetation maps.

2. Reports

a. Year-End/Agency Reports By December 15, 2010, a year-end report will be prepared by the HCA manager detailing the results of the year's management activities. This report will include recommendations for the continuation of various activities for the following fiscal year and will be submitted to the USFWS and CDFG as required under permit reporting conditions.

b. Annual Work Plan The work plan for the 2010-2011 fiscal year will be formulated by the end of the 2009-2010 fiscal year and will be based upon experiences during previous years' operations. This work plan will be submitted to the USFWS and CDFG.

OFFICE MAINTENANCE

HCA management will maintain offices in an organized manner to facilitate maximum efficiency. This section of the budget includes funds for general office work, utilities, and telephones, among other items/tasks.

OPERATIONS

Operations include the training and professional growth of CNLM personnel, and inspection of the HCA by CNLM administration. Funds have been allocated in the current budget for the HCA Managers to attend classes or seminars during the fiscal year. Also included within this category of activity is the conduction of employee reviews.

WORKLOAD AND BUDGETS

SUPERVISION AND STAFFING

The Area Manager will be supervised by CNLM's Director of Science, Dr. Deborah Rogers. Tasks and hours will be coordinated by the Area Manager and approved by Dr Rogers. The Area Manager, Markus Spiegelberg will supervise the HCA Managers, Patrick McConnell and Jessica

Vinje. Additionally, hours have been allocated for a Dr. Rogers to assist with document reviewing and scientific research conducted on CNLM preserves.

BUDGETING

A budget of \$11,040 has been allocated for this fiscal year and is included here as Appendix 2. Every effort will be made by HCA Management to allocate time and expenses according to this estimated budget.

REFERENCES

CNLM. 2009. Kelly Ranch Habitat Conservation Area Annual Report. December, 2009.

CNLM. 2008. Habitat Management Plan for the Kelly Ranch Habitat Conservation Area. April, 2008.

Planning Systems. 2001. Revised Open Space Natural Habitat Restoration and Revegetation Program, Kelly Ranch "Core Area." Planning Systems #980738.

Keeley, J. E., M. C. Vasey, and V. T. Parker. 2007. Subspecific variation in the widespread burl-forming *Arctostaphylos glandulosa*. Madrono. 54(1) 42-62.

APPENDICES

Appendix 1. Task Schedule 2009-2010

Task	October- December 2009	January-March 2010	April to June 2010	July to September 2010
Nonnative Plant Removal	X	X	X	X
Sensitive Plant Surveys		X	X	X
Habitat Assessments		X	X	
Orcut's Hazardia Population Studies				X
Del Mar manzanita sampling			X	
Coastal California Gnatcatcher Surveys		X	X	
GIS/Database	X		X	
Fencing/Signage	X			X
Patrolling	X	X	X	X
Reports				X
Public Outreach	X	X	X	

Appendix 2. Annual Budget 2009-2010

Budget Task Detail
Kelly Ranch 09-10
Annual Budget for Yr 2009-2010
Ongoing Expenses

10/06/2009

Task list	Specific Description	Unit	Reinvestment	Quantity	Rate	Num Yrs	Cost	Contingency	Administration	Total Cost
Biotic Surveys										
Conservation Easement	Compliance	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
Ornithologist	Field Survey Cagn	L. Hours		16.00	30.55	1	488.80	0.00	117.31	606.11
Plant Ecologist	Field Survey: Cliff	L. Hours		3.00	30.55	1	91.65	0.00	21.99	113.64
Plant Ecologist	Field Survey:	L. Hours		12.00	30.55	1	366.60	0.00	87.98	454.58
Plant Ecologist	Field Survey:	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
Plant Ecologist	Field Survey: Wart	L. Hours		14.00	30.55	1	427.70	0.00	102.64	530.34
Plant Ecologist	Field Survey: Wart	L. Hours		8.00	36.20	1	289.60	0.00	69.50	359.10
Plant Ecologist	Field Survey: rare	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
Project Management	Manage Project	L. Hours		2.00	45.53	1	91.06	0.00	21.85	112.91
Science Director	Coordination/Overs	L. Hours		8.00	50.00	1	400.00	0.00	96.00	496.00
Sub total							2,888.61	0.00	693.26	3,581.87
Field Equipment										
Power Tools	Misc. Tools	Year		1.00	25.00	1	25.00	0.00	6.00	31.00
Vehicle	Transportation:	Mile		1,100.00	0.55	1	605.00	0.00	145.20	750.20
Sub total							630.00	0.00	151.20	781.20
General Maintenance										
Dumpster, Rental	Off site Huff	Year		0.04	1,200.00	1	48.00	0.00	11.52	59.52
Sub total							48.00	0.00	11.52	59.52

NOTE: Because the values are rounded, there may be small errors.

Budget Task Detail
Kelly Ranch 09-10
Annual Budget for Yr 2009-2010
Ongoing Expenses

10/06/2009

Task list	Specific Description	Unit	Reinvestment	Quantity	Rate	Num Yrs	Cost	Contingency	Administration	Total Cost
Habitat Maintenance										
Exotic Plant Control	Backpack Spray:	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
Exotic Plant Control	Facilitate	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
Exotic Plant Control	Hand pull Saharan	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
Exotic Plant Control	Hand pull Saharn	L. Hours		8.00	36.20	1	289.60	0.00	69.50	359.10
Exotic Plant Control	Herbicide: Fusilade	Gallon		0.15	80.00	1	12.00	0.00	2.88	14.88
Exotic Plant Control	Herbicide 41%	Gallon		0.25	180.00	1	45.00	0.00	10.80	55.80
Sub total							1,079.80	0.00	259.15	1,338.95
Office Maintenance										
Office Supplies,	supplies and	Year		1.00	75.00	1	75.00	0.00	18.00	93.00
Rent	Office	Year		1.00	186.00	1	186.00	0.00	44.64	230.64
Telephone	Telephone and	Year		1.00	120.00	1	120.00	0.00	28.80	148.80
Sub total							381.00	0.00	91.44	472.44
Operations										
Audit	Audit	Annual		1.00	127.64	1	127.64	0.00	30.63	158.27
Conferences	Conference &	Year		1.00	55.80	1	55.80	0.00	13.39	69.19
Insurance	General	Annual		1.00	323.05	1	323.05	0.00	77.53	400.58
Other	Staff Retreat PM	L. Hours		2.00	36.20	1	72.40	0.00	17.37	89.77
Other	Staff Retreat PM	L. Hours		2.00	30.55	1	61.10	0.00	14.66	75.76
Other	Vacation, Holiday,	L. Hours		10.00	30.55	1	305.50	0.00	73.32	378.82
Sub total							945.49	0.00	226.91	1,172.40

NOTE: Because the values are rounded, there may be small errors.

Budget Task Detail
Kelly Ranch 09-10
Annual Budget for Yr 2009-2010
Ongoing Expenses

10/06/2009

Task list	Specific Description	Unit	Reinvestment	Quantity	Rate	Num Yrs	Cost	Contingency	Administration	Total Cost
Public Services										
Community Outreach	Meetings	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
Patrolling	Patrol	L. Hours		32.00	30.55	1	977.60	0.00	234.62	1,212.22
Sub total							1,222.00	0.00	293.28	1,515.28
Reporting										
Administrative	Operations PM	L. Hours		16.00	30.55	1	488.80	0.00	117.31	606.11
Annual Reports		L. Hours		4.00	45.53	1	182.12	0.00	43.70	225.82
Annual Reports		L. Hours		16.00	30.55	1	488.80	0.00	117.31	606.11
Annual Work Plan	Plan And Par	L. Hours		2.00	45.53	1	91.06	0.00	21.85	112.91
Annual Work Plan	Plan And Par	L. Hours		8.00	30.55	1	244.40	0.00	58.65	303.05
GIS/CAD Management	Data Management	L. Hours		2.00	45.53	1	91.06	0.00	21.85	112.91
GIS/CAD Management	Data Management	L. Hours		4.00	30.55	1	122.20	0.00	29.32	151.52
Sub total							1,708.44	0.00	410.02	2,118.46
Sub Total for All Categories							8,903.34	0.00	2,136.80	11,040.14

NOTE: Because the values are rounded, there may be small errors.

Appendix 3. HCA Location Maps

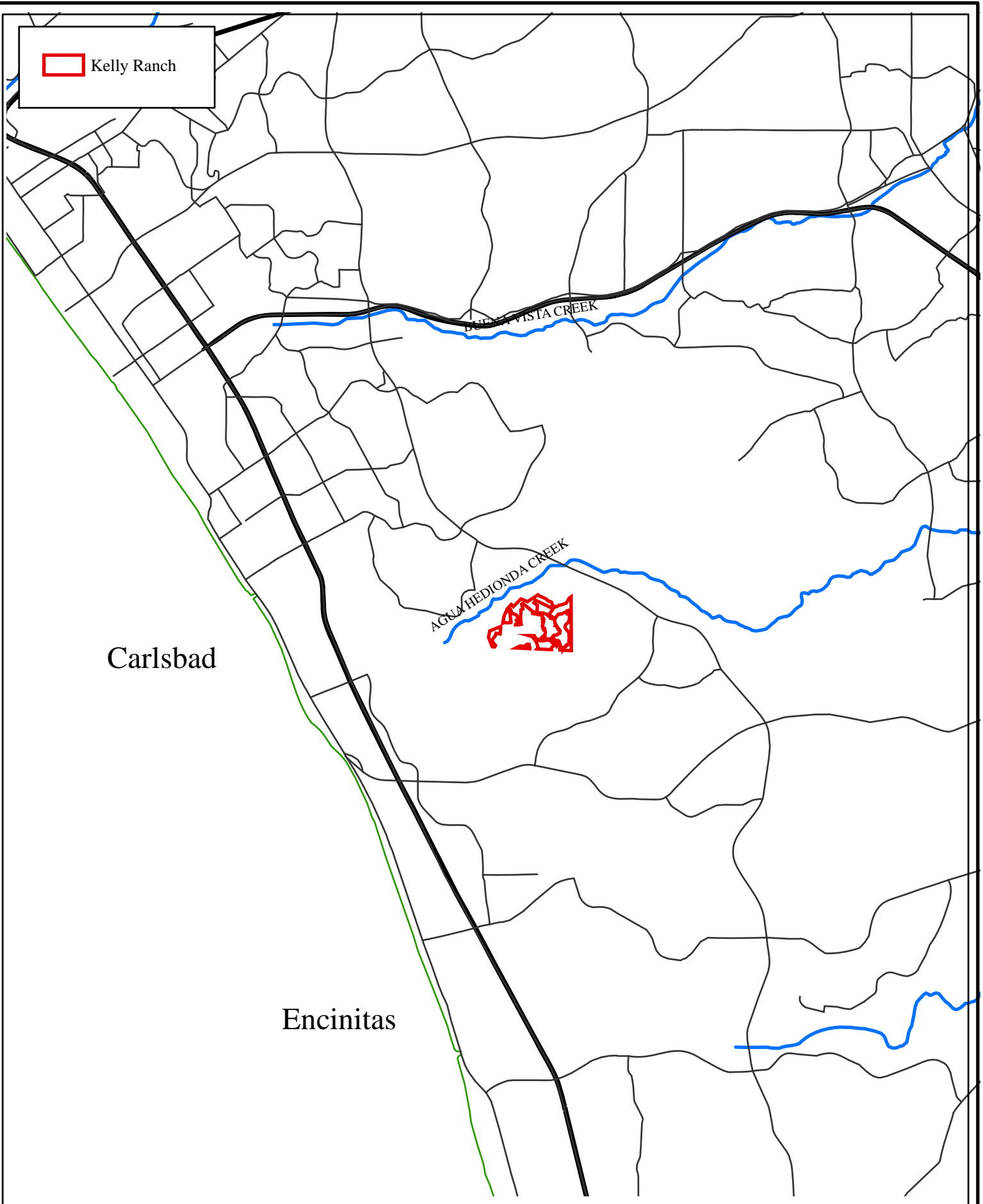


Figure 1
Preserve Vicinity
Kelly Ranch Habitat Conservation Area - Carlsbad, CA





Figure 2
Preserve Location
Kelly Ranch Habitat Conservation Area - Carlsbad, CA

